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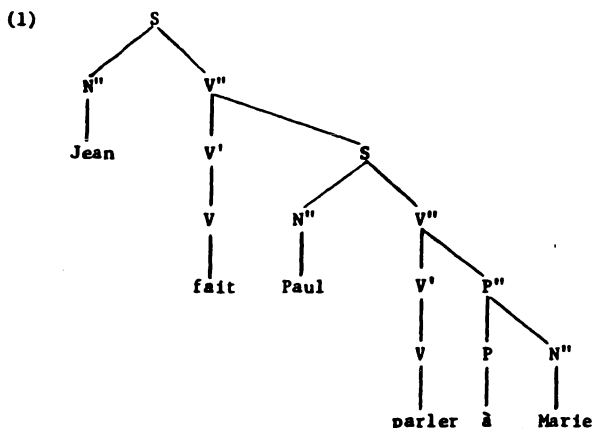
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THE POST-CYCLICITY OF CLITIC PLACEMENT
AND THE *FAIRE* CONSTRUCTION IN FRENCH¹

In this paper I want to consider the validity of R. Kayne's (1975) claim that clitic placement (hereafter Cl-P1) is post-cyclic. I consider post-cyclic rules in principle and conclude that they are unlearnable within Hamburger and Wexler's (1973) formal proof of the learnability of a transformational grammar. In so far as transformational grammars should provide a model which can account for language acquisition, I conclude that Cl-P1 should not be formulated as post-cyclic. Instead Cl-P1 should be formulated as cyclic in so far as Hamburger and Wexler's proof is the only one presently available.

The necessity of this position leads to a reconsideration of the *faire* construction which is the principal argument in favor of the post-cyclicity of Cl-P1. In order to argue that Cl-P1 is cyclic, we must also maintain that the *faire* construction is a base construction and not transformationally derived. For example, if the *faire* construction is transformationally derived from an underlying structure like (1), there is no way to claim that Cl-P1 can be cyclic without predicting the unacceptable sentences in (2).

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1. I want to thank Carlos Otero, Judith Strozer and Wendy Wilkins for making helpful suggestions on earlier versions of this paper. I especially want to thank Joe Emonds for many detailed comments and discussions on the topics treated here. In addition I'm indebted to Jean-Marie Hombert for discussions of the data, although almost all of the data here is taken from Kayne (1975).



- (2) *Jean fait lui parler Paul.
 *Jean fait lui dénoncer Paul.

However if there was some way that we could generate the *faire* construction as a base configuration, we would be in a position to make C1-P1 cyclic and hence learnable.

Keyne's arguments in favor of a transformational account concern problems that a base analysis would have in expressing subcategorization restrictions. For example in (3), *partir* is not subcategorized for a following NP as the unacceptability of (3b) demonstrates. However in the *faire* construction, *partir* does require a following NP.

- (3)a. Jean part
 (Jean is leaving.)
 b. *Jean part Marie.
 (Jean is leaving Marie.)
 (4) Marie fait partir Jean.
 (Marie is making Jean leave.)

Kayne finds that a base analysis would require two separate subcategorizations, one for *partir* and one for *faire partir*. There would be a further need to postulate a redundancy rule relating these two subcategorizations. Kayne objects to these redundancy rules on several counts. His objections can be avoided however if we reconsider the strictly local subcategorization principles developed in Chomsky (1965). In light of research done since 1965 I suggest an extension of Chomsky's subcategorization principle on independent grounds to permit "broadly local" subcategorization. This principle then allows a base analysis of the *faire* construction. It guarantees that the "subject" of the infinitive is a direct object with intransitive verbs and indirect object with transitive verbs. It also allows a base analysis of *Se-Placement*, the central transformation that must crucially precede the transformation that Kayne postulates to derive the *faire* construction.

1. The Non-Learnability of Post-Cyclic Rules²

Hamburger and Wexler (1973) provide the first formal proof that a transformational grammar is "learnable" in the sense that the learner applies a procedure to a finite set of data and hypothesizes in a limited amount of time a grammar which, given additional data, will not be altered by the procedure. In order to succeed this proof needs to be able to guarantee that if a hypothesized grammar is incorrect, there is a chance better than

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2. Throughout this section, I am talking about *unbounded* post-cyclic rules. In principle local rules may be learnable despite their post-cyclicity. However, I have never seen any such rule proposed and it seems that in the literature, post-cyclic rules are reserved for unbounded ones. Of course the arguments presented here have no force against a contention that Cl-Pl is part of universal grammar and hence does not need to be learned. Even if such a position could be sustained, there still remains a theoretical premium attached to eliminating post-cyclic rules since a grammar restricted to cyclic and last-cyclic transformations would be simpler than one that also admitted post-cyclic transformations.

zero that data will be presented to the procedure which will not be accounted for in the currently hypothesized grammar. In order to demonstrate this, the proof must assume that there is a limit to the number of nodes in a phrase marker that are eligible to fit the structural description of a transformation. Such an assumption permits a demonstration that for every base configuration B showing an error, there is some configuration b' which is the smallest base configuration showing the same error. In this way Hamburger and Wexler can guarantee that if an incorrect grammar is hypothesized, the piece of data required to correct the mistake will be given to the procedure.

Suppose that there was no limit to the number of eligible nodes in a phrase marker, as would have to be assumed if unbounded post-cyclic rules were possible. Such an assumption will have the effect of making the smallest phrase marker that any transformation could apply on of an arbitrary degree. When the smallest phrase marker for some transformation is arbitrary, there is no way to insure the presentation of an unbounded number of phrase markers which are required to guess the rule, in a finite amount of time. Hence if the learner makes an improper guess, there is no guarantee that the constructions needed to correct the error will ever be presented to the procedure.³

As an illustration, suppose that there is a grammar with the following phrase structure rules : $S \rightarrow A-B$ and $B \rightarrow S$. Suppose further that this grammar has a single transformation represented in (5).

- (5) SD : X - A - B - Y
 SI : 1 - 2 - 3 - 4
 SC : 1-2-C-3 - 4

3. This alternative would also make a grammar unlearnable in a finite amount of time. See Hamburger and Wexler (1973).

(5) has the effect of turning a sequence AAA...B into ACACAC...B by inserting C between every A and B cyclically. Now consider the situation if the learner mistakenly guesses that (5) is an unbounded post-cyclic rule. This guess will have the effect of producing an unbounded set of strings ACAA...B, AACA...B, AAC...B and so on. There is no way to guarantee that the learner will guess in a finite amount of time that (5) is a cyclic rule on the basis of a finite amount of data. Everytime contrary data is presented to his hypothesis that (5) is post-cyclic, the learner can simply formulate a complication of (5). Thus the string ACACB might lead the learner to hypothesize the following unbounded rule :

- (6) SD : X - A - B - A - B - Y
 SI : 1 - 2 - 3 - 4 - 5 - 6
 SC : 1 - 2 - C - 3 - 4 - C - 5 - 6

For each additional degree the learner could complicate the structural description of (5) rather than reanalyze it as a cyclic rule. The learner has this option because the assumption that (5) is unbounded means that the smallest *b'* that (5) applies to is *n*, and since *n* cannot be guaranteed to occur in a finite amount of time, the data necessary to recognize that (2) cannot be post-cyclic is lacking.

These arguments against the learnability of unbounded post-cyclic rules cast doubt on the learnability of Kayne's C1-P1 rule. In the next section I want to examine the rationale for positing that C1-P1 is post-cyclic.

2.1 The Faire Construction and Subcategorization

Kayne's major argument in favor of considering C1-P1 as post-cyclic revolves around the faire construction.⁴ Kayne's first

4. Actually Kayne presents a second argument concerning *facile*. The implication of Section I is that this transformation will need to be reanalyzed as a base configuration. I have heard however that this is already being worked on by other researchers, so I have left this avenue open.

objection to a base analysis of the *faire* construction involves the need for redundant subcategorization restrictions. Recall the examples of *partir* in (3)-(4). Kayne argues that a base analysis will need to state two restrictions : on the one hand that *partir* will not be subcategorized for a following noun phrase, but on the other hand that in the environment of *faire*, *partir* will take a following noun phrase. In addition to these two statements a redundancy rule will need to be constructed to relate them. Kayne objects to such a treatment on the grounds that it is merely a notational variant of the transformational approach and that redundancy rules have a less well understood formal character in linguistic theory than transformations do. Kayne's objections can be avoided however if we reconsider the formal characterization of strict subcategorization presented in Chomsky (1965).

Chomsky originally proposed that subcategorization rules be formulated in such a way that any entry of the form $A \rightarrow CS / __ B$ requires that AB must form a C which is a category symbol appearing to the left of a rule $C \rightarrow \dots A \dots$ which introduces A in the first place. In this sense all subcategorization rules are strictly local in as much as A is defined as a head of a phrase and C immediately dominates both A and B. There are examples however where it seems necessary to subcategorize some A for a B in a context that is not strictly local but only "broadly local" in a sense to be made specific shortly. Let me outline some of these cases.

First consider the case of relative clauses. Smith (1963) noted that there was a restriction on relatives to the effect that nouns with indefinite determiners cannot take non-restrictive relatives. From this fact it was argued that the relative should properly originate in the determiner system of the noun and undergo an obligatory movement rule in order to get it into its surface post-head position. The problem with this analysis is that the

need to express a co-occurrence restriction forces the postulation of a structure which never has a surface realization, as well as an ad hoc movement rule. The theoretical desirability of avoiding the postulation of nodes in deep structure positions where they have no surface realization is explored in Hooper (1973) and Emonds (1976). If we had some way to express subcategorization in a way that is not strictly local we could maintain the co-occurrence restriction noted by Smith without adopting a deep structure and derivation that we would like to avoid on independent grounds.

A similar mechanism is also needed to express the co-occurrence restrictions in the constructions in (7).

- (7)a. John is as tall as Bill is.
 b. Harry is $\left\{ \begin{array}{l} \text{more} \\ \text{less} \end{array} \right\}$ intelligent than Bill is.
 c. Bill is too short to play basketball professionally
 d. He donated enough money for us to go to the movies.

There exist dependency relationships between the underlined elements in (7a-d). In order to be able to express these relationships without incurring the same difficulties present in the analysis of relatives we need a way of subcategorizing elements in a looser way.

Yet another example is contained in Bresnan's (1972) observation that some verbs need to be subcategorized for the kind of COMP and even AUX which can appear in a complement S. For example, *ask* in the sense of *request* requires a subjunctive clause. In the subcategorization principle proposed by Chomsky, such restrictions cannot be expressed because there is no phrase structure rule of the form $V' \rightarrow \dots V \dots \text{COMP}$ or $V' \rightarrow \dots V \dots \text{AUX} \dots$

In an attempt to describe these co-occurrence restrictions, we might consider giving up the subcategorization principle suggested in Chomsky in favor of one that is local in a broader sense.

For example, we might utilize Klima's (1964) notion of "in construction with" and require that if there is a subcategorization rule of the form A→CS/ B, A or B must be immediately dominated by some third node C which dominates the other node specified in the subcategorization rule.⁵ That is to say, either A must be in construction with B, or B must be in construction with A. This rule permits us to express the restrictions discussed above but it also raises problems with the instances that the original subcategorization principle was designed to handle. For example, consider the verb *decide* in (8) which is optionally subcategorized for a following PP.

(8) John decided on the boat.

According to our revised principle, we would then predict that the PP could be a daughter to either V' or V". Such a claim however forces us to give up the explanation of the ambiguity of (8) given in Chomsky (1965). Chomsky's explanation was that the subcategorization principle required that the PP appear in V' while the place-PP appear in V". Hence there was a structural explanation of the ambiguity. It thus seems that we do not want to totally replace the original subcategorization principle suggested by Chomsky.

In order to resolve this issue, let me recall the distinction made in Chomsky (1973) between a condition on the form of a rule and a condition on the function of a rule; that is to say, a condition on what constitutes a rule and a condition on how a rule is interpreted. With this distinction in mind, we might then say that requiring subcategorization rules to be strictly local as a condition on the *form* of a rule would prevent us from explaining the five examples above. If on the other hand we regard the

5. This use of Klima's 'in construction with' is first presented in Emonds' (1976). For further discussion see Emonds (1976c).

condition as one of function or interpretation, then the situation is significantly improved. We have seen from the discussion of *decide* that we want to preserve the strictly local conventions but at the same time we want to permit a broadly local interpretation in the necessary instances. We can then formulate the following conventions on the function of subcategorization rules.

- (9) Given a subcategorization rule of the form $A \rightarrow CS/__B$, place B in the closest generable node to A such that :
- Either A^L is in construction with B^L , or B^L is in construction with A^L .
where X^L is the highest X^n not dominating any other C whose lexical members contain a subcategorization restriction in their lexical entry.

The motivation behind the condition on X^L involves Siegel's (1975) and Aronoff's (1976) demonstration that certain morphological processes occupy hierarchical levels.⁶ What (9) accomplishes is that it allows us to express the correct generalization with respect to *decide* without sacrificing the capacity to express the broadly local dependencies discussed above. It does this by interpreting a subcategorization rule as broadly local only when no strictly local interpretation is possible.

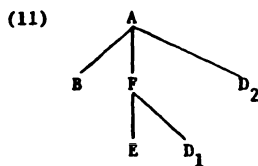
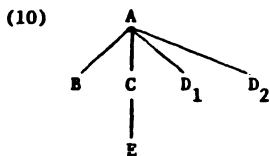
However (9) is still not quite complete. In the framework outlined in (9), it is possible for subcategorizations to be non-unique. Such a situation arises in (10) or (11) where $B \rightarrow CS/__D$ and $E \rightarrow CS/__D$.⁷

6. For example, if adverbs like completely really have the form



we do not want this to preclude saying that the verb and the manner adverb are in construction with each other in the sense of (9a). Since *ly* has no subcategorization restrictions it seems reasonable that it should not count in determining subcategorization uniqueness.

7. This assumes a set of phrase structure rules : ...



We need some convention associating each of the D's with the appropriate constituent. This problem never arises in the original subcategorization principle because it would not be possible to subcategorize E for D_1 or D_2 in (10), or B for D_1 in (11). In order to circumvent this problem we will add the following restrictions to (9).

- (9)b. Given A^L_{XB} there will be no third node C^L in the grossest constituent analysis of X such that C → CS/___B
- c. Two sisters of the same category will not be subcategorized for different heads.

The term *grosses constituent analysis* is formally defined in Wilkins (1976) as (12).⁸

- (12) A gross constituent analysis of $X = C_1 C_2 \dots C_n$ where C_1 is a constituent and for every other analysis $C'_1 C'_2 \dots C'_k$, then $k \geq n$. If for each C_j in a gross analysis $X_1 = C_1 \dots C_{j-1} C_j C_{j+1} \dots C_n$, there is no gross analysis $C_1 \dots C_{j-1} C_j C_{j+1} \dots C_n$ such that C'_j dominates C_j , then $C_1 \dots C_1 \dots C_n$ is the grossest constituent analysis.

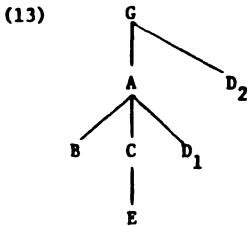
In (11), if the subcategorization rule is interpreted as involving B and D₂, then both E and D₁ on the one hand, and F on the other

7. ... $A \rightarrow BCFDD$
 $C \rightarrow E$
 $F \rightarrow ED$

8. Wilkins uses the principle in (12) to eliminate the need to state variables in transformational rules. It thus may be that we can factor out (9b) as one of the restrictions we need to state, or at least simplify it somewhat.

hand, are in a *gross constituent analysis* of X. However only F is in the *grossest constituent analysis*. Thus, (9b) prevents the subcategorization rule from applying to B and D₁ because in this case E which is also subcategorized for a D is in the grossest constituent analysis of X. (9b) however does not preclude interpreting the subcategorization rule as applying to B and D₂, since in this instance, F is the grossest constituent analysis of X.

In (10), the notion of grossest constituent analysis will not do any work because E will only be in a gross constituent analysis in a rule mentioning B and D. In this instance, (9c) will exclude (10) as a well formed phrase marker. The only alternative to (10) would be a structure like (13).



Empirical evidence in favor of these elaborations is presented with respect to extraction from adjectival and prepositional phrases in Hendrick (1976).

Within the subcategorization framework outlined in (9), we are able to overcome the initial objections made by Kayne. Consider (14).

- (14) *Elle fait entendre cette symphonie à Jean.*
 (She is making John listen to the symphony.)

We will not need to posit two separate subcategorization rules and a redundancy rule for *entendre*. Instead given the subcategorization principles in (9) and the phrase structure rules in (15), we can

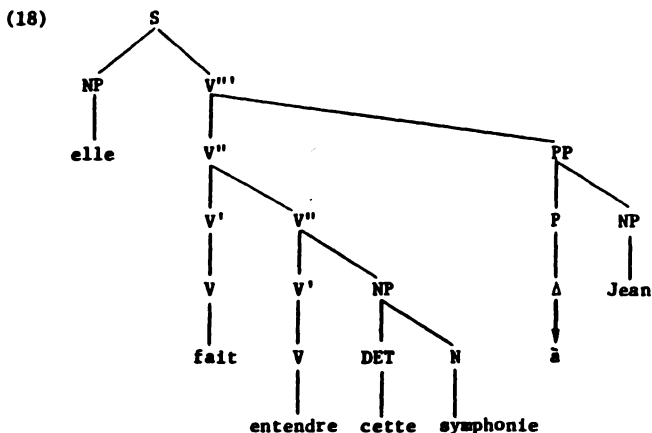
guarantee that the subcategorization statements in (16) and (17) will produce the proper structure in (18).⁹

$$(15) \quad V'' \rightarrow V' - \left\{ \begin{array}{l} V'' \\ NP - PP - PP - S \end{array} \right\}$$

$$V' \rightarrow \left\{ \begin{array}{l} V' \\ \{ PRO - CL \} \end{array} \right\} - V$$

$$(16) \quad \text{faire, +V, } \begin{array}{l} \text{ } V'' \\ \text{ } NP \\ \text{ } [+agent] \end{array}$$

$$(17) \quad \text{entendre, +V, } \text{ } NP$$

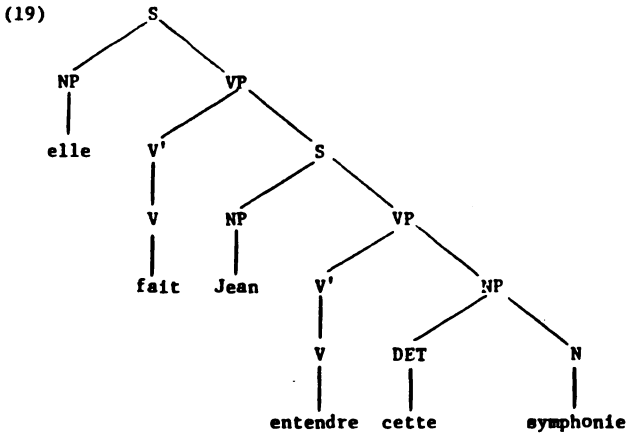


In (18), *faire* cannot be associated with *symphonie* without violating (9b) : there is an intervening V^L in the grossest analysis subcategorized for a following NP. *Jean* satisfies (9a) because the PP node is a node not containing a lexical item with subcategorization. It is not possible for *Jean* to satisfy the

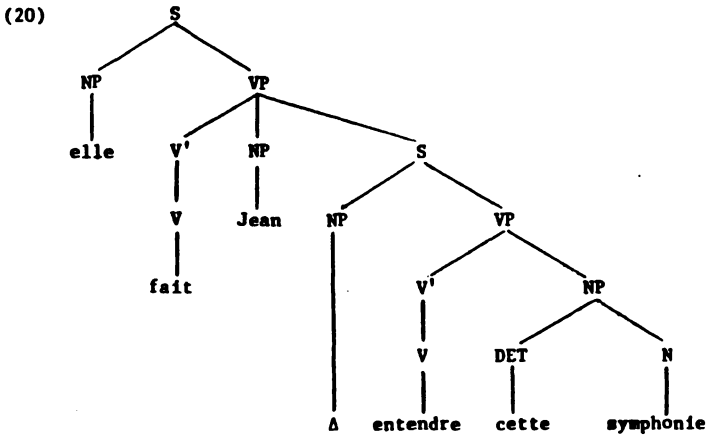
9. For justification of (15) see Emonds (1976b). Nothing crucially depends on these phrase structure rules : adopting alternative phrase structure rules can be accommodated to the analysis here with little or no revision to (9).

requirements of *entendre* because the former does not appear in the closest generable node to *entendre*.

Observe that (19) could never satisfy the subcategorization requirements in (16) and (17).



(19) is blocked because *Jean* does not appear in the closest generable NP position to *faire*. In (20) *Jean* does appear in the closest generable NP position.



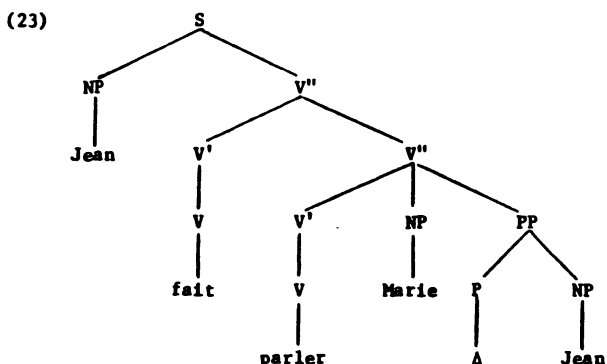
However (20) leaves the subject NP position of S empty. As a result, the Δ will surface, marking the structure as ill formed.

The subcategorization principles in conjunction with (16) and (17) also insure the correct output for intransitive verbs as well. Consider (21).

(21) *Jean fait parler Marie à Paul.*

(22) *(Jean is making Marie speak to Paul.)*

We guarantee that (21-22) will have the structure in (23).



Subsequently an insertion rule will replace the Δ , as in (18), and the output will be (23). The subcategorization principle permits *Marie* to satisfy the subcategorization requirements of *faire* because in contrast to (18), there is no intervening verb in the grossest analysis subcategorized for a following NP : *parler* is subcategorized for a following PP.

I thus conclude that a base analysis of the *faire* construction can avoid postulating redundant subcategorizations.

2.2 *Verb Raising*

The base configuration being advocated here for the *faire* construction is not totally satisfactory for while it adequately

handles the order of constituents, it will interact adversely with other rules of the grammar.

On the one hand, treating the embedded verbs as structurally similar to other infinitives creates certain problems with null anaphora in VP's. In general, VP's can be referred to by null anaphora as the examples in (24) taken from Emonds (1976b) demonstrate.

(24)a. *Marie a voulu visiter le musée, mais moi, je n'ai pas voulu.*

(Marie wanted to visit the museum, but me, I didn't want to.)

b. *Beaucoup de monde osent entrer sans payer, et nous devrions oser aussi.*

(A lot of people are trying to enter without paying and we ought to try too.)

c. *Pierre doit renverser ces tables, mais il ne peut pas.*

(Pierre should turn the tables over, but he can't.)

However, the same null anaphora is blocked in the faire construction.

(25)a. **Jean ne fera pas manger ces gâteaux à Marie mais moi, je ferai.*

(Jean won't make Marie eat these cakes but me, I will.)

b. **Jean ne fera pas renverser ces tables à Pierre mais moi, je ferai.*

(Jean won't make Pierre turn the tables over but me, I will.)

In this aspect of its behavior, the infinitive in the faire construction acts more like the past participle which also fails to be replaced by null anaphora. For example, the following sentences (borrowed from Emonds, 1976b) are unacceptable.

(26)a. **Marie a visité le musée, mais moi, je n'ai pas.*

(Marie visited the museum but me, I didn't.)

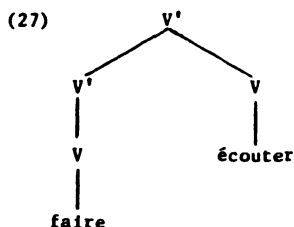
b. **Beaucoup de monde sont entrés sans payer, et nous aurions du être aussi.*

(A lot of people entered without paying, and we should have too.)

c. **Pierre a renversé des tables, mais Paul n'a pas.*

(*Pierre turned the tables over, but Paul didn't.*)

The superficial similarity between the past participle's behavior and the behavior of the infinitive in the *faire* construction might suggest that the structure of the *faire*-infinitive might be (27).



However, the problem with this analysis is that it makes it difficult to describe in a principled way the morphological difference between the infinitive and the past participle. Emonds (1976b) has proposed treating the past participle by the following phrase structure rule :

$$(28) \quad V' \longrightarrow \left\{ \begin{array}{l} V' + V + \acute{e} \\ V + \text{TENSE} \end{array} \right\}$$

If (27) was a base structure we would be forced to give up (28) and would revert to subcategorization to express the morphological difference between the infinitive and the past participle. In as much as the morphology of the past participle is a productive process, we would prefer to maintain (28) instead of resorting to subcategorization. Moreover, a reflexive clitic can appear in front of the infinitive in the *faire* construction as (29) indicates, but no such clitic is possible before a past participle as the unacceptability of the sentences in (30) demonstrates.

(29)a. *Jean fait se parler Marie*

(*Jean is making Marie talk to herself.*)

b. *Jean fait se connaître Marie.*

(Jean is making Marie know herself.)

(30)a. **Jean est se parlé.*

b. **Jean est se connu.*

This is strong counter evidence to positing a structure like (27) as a base configuration for *faire*+infinitive.

As an alternative, we could generate the *faire* infinitive construction as in (19) or (23). This would allow us to keep the generalization in (28) which explains the morphological differences between the past participle and the infinitive of the *faire* construction. At the same time it would permit a base generation of the reflexive clitics which will be outlined in the next section, but which does not seem possible if the structure in (27) is a base configuration underlying the *faire* construction. We could then postulate a verb raising transformation which attaches the infinitive to *faire*. This process is formalized in (31).

(31) SD : X - V - V' - Y
 [+CAUSE]
 SI : 1 - 2 - 3 - 4
 SC : 1 - 2 + 3 - 4

This process explains why the infinitive in the *faire* construction is not a past participle. Furthermore, it also explains why null anaphora fails to operate in the *faire* construction. In addition, it has the advantage of letting us state Cl-P1 as (32) in accordance with Emonds (1976) rather than as (33) as in accordance with Kayne (1975).

(32) X - [V, [PRO^Δ] - Y] + Z - [NP (ā) - PRO] - W
 1 - [5] - 3 - Ø - Ø - 6
 -FEM

(33) W - NP - V - X - PRO - Y 1 - 2 - 5+3 - 4 - 6

The NP in Kayne's version of Cl-P1 is mentioned only to provide a context for the rule to operate. Wilkins (1976) argues persuasively that transformations should only mention crucially affected terms. From this metatheoretical position Emonds' formulation which avoids the mentioning of the subject NP is preferable.

2.3 *Reflexive Clitics*

The second argument that Kayne advances in support of a transformational derivation of the *faire* construction involves demonstrating that another transformation must operate before the transformation which creates the *faire* construction. Kayne only seriously argues in favor of one major transformation, *Se-Placement* (Se-P1), preceeding the transformation creating the *faire* construction.¹⁰

Only reflexive clitics can appear before the embedded verb in the *faire* construction. For example (34) is acceptable but (35) is not.

- (34) *Jean fait se* $\left\{ \begin{array}{l} \text{parler} \\ \text{connaître} \end{array} \right\}$ *Marie.*

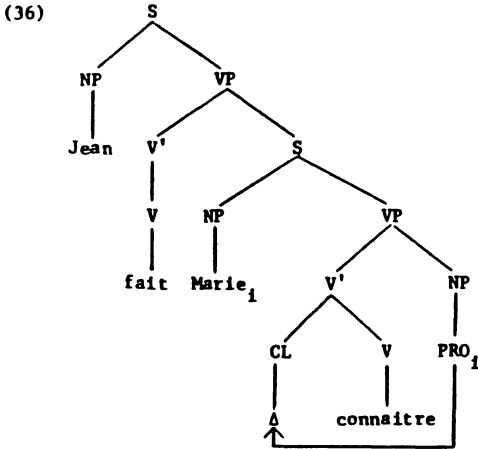
Jean is making Marie $\left\{ \begin{array}{l} \text{talk to herself.} \\ \text{know herself.} \end{array} \right\}$

- (35) **Jean fait* $\left\{ \begin{array}{l} \text{le connaître} \\ \text{lui parler} \end{array} \right\}$ *Marie.*

Jean is making Marie $\left\{ \begin{array}{l} \text{know him.} \\ \text{talk to him.} \end{array} \right\}$

10. Kayne suggests in passing that optional subcategorizations may really be a case of an optional deletion transformation where all subcategorizations are stated without using optionality. However Kayne never really seriously argues in favor of this proposal and its inadequacies are evident as soon as we ask how this deletion transformation is supposed to know where it should operate. The only likely mechanism is rule features and since optionality is firmly established in linguistic theory, there is little need to appeal to a mechanism whose status is dubious.

In Kayne's analysis, this follows if Se-P1, unlike Cl-P1, is cyclic. The underlying structure of (34) would be (36) for Kayne.



The arrow in (36) shows the movement of the PRO on the lower cycle. Since Cl-P1 is post-cyclic, it will never appear before the embedded verb. Kayne points out that ordering Se-P1 before the passive enables him to explain that the passives in (37) are unacceptable.

- (37)a. **Tu te seras décrit par ta femme.*
 (You will be described to yourself by your wife.)
 b. **Jean se sera décrit par sa femme.*
 (Jean will be described to himself by his wife.)
- (38)a. *Elle te sera décrite par ta femme.*
 (She will be described to you by your wife.)
 b. *Ils vous seront présentés par Paul.*
 (They will be introduced to you by Paul.)

If passive follows Se-P1, the underlying structure of the sentences in (37) will be such that the subject will not be co-referential with the pronoun and consequently Se-P1 will not apply. On the

other hand since Cl-P1 is post-cyclic, nothing will prevent the generation of (38).

Kayne's version of Se-P1 tends to obscure the high number of exceptional and semi-productive characteristics of *se* as opposed to the regular, productive characteristics of other clitic pronouns. To begin with, Kayne's analysis of the unacceptability of (37) would attribute the ill-formedness to a violation of the structural description of Se-P1. However the pattern in (37) and (38) is also present in (39) and (40) where no such explanation is available.

(39)a. *Elle t'est infidèle.*

(She is unfaithful to you.)

b. *Jean lui est infidèle.*

(Jean is unfaithful to her.)

(40)a. **Tu t'es infidèle.*

(You are unfaithful to yourself.)

b. **Jean s'est infidèle.*

(Jean is unfaithful to himself.)

Kayne has no explanation for the similarity of the behavior of these sets of sentences. They indicate that what is of importance in the exclusion of these sentences is not an ordering principle but the combination of a reflexive clitic and the verb *être*. In order to exclude (40) we might consider placing a restriction on *être* so that it does not co-occur with a reflexive pronoun.

Être is not the only verb which appears to have this restriction. Consider the following sentences.

(41) *Jean se fait connaître à Marie.*

(Jean is making Marie know him.)

(42) **Jean se fait embrasser à Marie.*

(Jean is making Marie kiss him.)

Kayne proposes that the derivation of (41) is roughly (43).

- (43) *Jean*₁ *fait Marie connaître* PRO₁
Jean fait Marie connaître PRO Cycle 1—nothing happens
Jean fait connaître PRO à Marie Cycle 2—Faire Infinitive
 transformation
 applies
Jean se fait connaître à Marie Cycle 2—Se-Pl applies.

The fact to be observed here is that if exactly the same derivational sequence is applied to (42), Kayne's rules make an improper prediction. This is due to the fact that, as Kayne notes, the structure SE FAIRE A NP exhibited in (41) and (42) is not at all productive. Kayne's rules do not reflect the semi-productivity of the construction and we might legitimately ask how we are to allow Se-Pl in (41) but prevent it in (42). In as much as this is a lexically governed fact, the most natural device with which to present these constructions formally is the co-occurrence restrictions.¹¹ However, we are unable to utilize these restrictions if Se-Pl is in fact a transformation.

Let us consider the hypothesis that unlike the other clitics, the reflexive clitics are base generated and not transformationally derived. In this respect the following sentences are of interest.

- (44)a. *Jean s'écrit à lui-même.*
 (Jean writes to himself.)
 b. *Quand on se parle à soi-même...*
 (When one speaks to oneself...)

-
11. One alternative might be rule features. However we have difficulties expressing this alternative. Certainly neither *connaître* nor *embrasser* should be specified as *-[Se-Pl]* since the following sentences are acceptable.

1. *Jean fait se connaître Marie.*
 11. *Jean et Marie s'embrassent.*

By the same token the feature cannot be placed on *faire* since in (41) but not in (42), *faire* permits Se-Pl. If a rule feature was to be specified, it would need to recognize *faire connaître* as a compound verb in the lexicon. The need to recognize a compound verb of this sort clearly argues against Kayne's analysis of the *faire* construction in so far as it forces generating a base construction for some *faire* constructions.

Kayne proposes to explain these sentences by relating them to sentences like (45) where a detachment transformation has applied.

- (45) *Je lui parlerai, à Jean.*
(I will speak to him, to Jean.)

Notice however that in the detachment transformation, comma intonation is induced, but no such intonation appears in (44). This is indicative of a structural reordering in (45) making the PP a daughter to the root S (cf. Emmons, 1976). No such reordering takes place in (44) and hence comma intonation is not induced. Moreover, the sentences in (46) which parallel those of (44) except that they do not involve reflexive pronouns, are unacceptable.

- (46) a. *Jean lui écrit à lui.*
 b. *On lui tirait sur lui.*
 c. *On lui courait après lui.*

The unacceptability of (46) also argues against the detachment analysis since if (44) and (45) form a single phenomenon, we would expect (46) to be acceptable. These facts taken together indicate that Se-P1 is not a movement transformation. Instead the reflexive clitics must be base generated and the pronoun optionally deleted.¹²

The base generation of reflexive clitics can account for the facts above. We can prohibit the generation of (37), (40) and (42) by subcategorizing *être* and *faire* as not occurring with a preverbal reflexive pronoun. This restriction is expressed in (47).

- (47) +V, [-REFL] _____

The major counterexample to this hypothesis, namely that reflexives in the *passé composé*, can be avoided by postulating that all *passés*

12. Note that a copying transformation followed by a rule like (48) is not possible here because the copying transformation runs into the same problems as Se-P1.

composés have underlying *avoir* and that a late, local rule inserts *être*. Other exceptions to (47), like (41), will be treated as separate lexical entries related by a redundancy rule.

In considering sentences like (44), we might consider proposing that the reflexive clitic is generated freely in the base and that the reflexive pronouns are simply empty PRO's with reflexive markers that undergo a copying transformation so that they agree with the subject. This is fundamentally the position of Chomsky (1973) with respect to reflexivization in English, which in turn is borrowed from Helke (1973). When an empty pronoun with a reflexive feature follows the reflexive clitic, it is optionally deleted. This deletion rule is roughly formalized as (48).

$$\begin{array}{lcl}
 (48) \text{ SD : } U_1 - & \text{PRO} - & U_2 - [+REFL] - U_4 \\
 & [+REFL] & \\
 \text{SI : } & 1 & 2 \quad 3 \quad 4 \quad 5 \\
 \text{SC : } & 1 & 2 \quad 3 \quad \emptyset \quad 5
 \end{array}$$

When the rule applies it will generate (49).

- (49)a. *Jean s'écrit.*
 b. *Quand on se parle...*

However this rule unfortunately will also generate the unacceptable (50).

- (50) **Jean se part.*
 (*Jean is leaving himself.*)

We need to limit the free generation of the reflexive clitics so as to exclude generating them without a following reflexive marker. In order to do this we could subcategorize the reflexive marker as having a preceding *se*. This might be represented as (51).

- (51) +REFL, +(se)_____

This restriction will insure that *se* only occurs in sentences with objects if we accept the convention adopted by Chomsky (1965) that

only features corresponding to frames in which an item *can* occur are specified and that an item is specified negatively for every feature not mentioned in its entry. In addition we preclude sentences like (52) from receiving a reflexive reading by virtue of the Unlike Person Condition discussed in Chomsky (1973) and due originally to Postal.

(52) *Jean s'est attaqué à lui.*

The treatment of Se-Pl as being subsumed in the co-occurrence restrictions of the lexicon can also deal adequately with the facts surrounding the so-called inherent reflexives. An inherent reflexive verb, like *s'évanouir* (to faint), will be subcategorized in the lexicon for a preceding reflexive pronoun. The treatment of the inherent reflexives as being contained in the lexical entry of the verb is perfectly consistent with the non-productive character of this construction. Furthermore any transformational treatment of this construction will of necessity mark the inherently reflexive verb in such a way that they co-occur with the correct reflexive NP or PP to their right and that Se-Pl *obligatorily* applies to them. For example, in the transformational analysis proposed by Kayne, a constraint is proposed to the effect that inherently reflexive verbs do not co-occur with an accusative NP or dative NP in the case of *s'imaginer*. This constraint needs to be localized in Kayne's framework so that inherent reflexives originate as post-verbal pronouns in the base. The difficulty with Kayne's constraint is that it is really a co-occurrence restriction, not a constraint on transformational applicability. As such it is simply a variant of the co-occurrence analysis I suggested above. Lexically governed facts of this sort belong properly in the lexicon, the repository for idiosyncratic and semi-productive facts of the lexicon, not in the transformational component which is designed to capture truly productive relations. Treating the inherent reflexives with co-occurrence restrictions rather than transformations allows us

to maintain this generalization and makes the construction of 'core grammars' in the sense of Chomsky (1976) or Emonds (1976c) possible.

Some of the particular points of the foregoing discussion may need further refinement. What is of importance however is that the analysis of preverbal reflexives should recognize their semi-productive characteristics. These characteristics in conjunction with the sentences in (44) and (46) require a lexical and not a transformational analysis of the generation of the preverbal reflexive clitics. This in turn reduces the need to posit a transformation to derive the *faire* construction.

2.4 *Subject Oriented Adverbs and the Faire Construction*

I would now like to address Kayne's third argument in favor of a transformational analysis of the *faire* construction. Essentially this argument concerns the ability of the transformational analysis to identify an underlying subject of the infinitive. Kayne argues that this ability is important in order to give the correct interpretation to certain adverbs that can only refer to subjects. In support of this point Kayne looks to the following contrasts.

- (53) *Paul s'est hissé d'une seule main sur le cheval.*
(Paul lifted himself with one hand onto the horse.)

- (54) *Elle a poussé Paul d'une seule main dans l'eau.*
(She pushed Paul with one hand into the water.)

In (53) and (54) the adverb can only refer to the subjects of the sentences. In (55) the adverb can refer to *Paul*.

- (55) *La peur a fait se hisser Paul d'une seule main sur le cheval.*
(Fear made Paul lift himself with one hand onto the horse.)

Kayne proposes to explain this fact by constraining these adverbs to being interpreted with subjects and by appealing to the under-

lying status of *Paul* as a subject of the infinitive in (55) in order to permit the correct interpretation.

The issue I want to take with Kayne's analysis is that it is not clearly established that it is the subject relation which is crucial to the interpretation of these adverbs. Agency rather than subjectness is the proper relation to be used in mapping the interpretation of the adverb.¹³ Support of this counterhypothesis is found if we consider adjectives with agent complements. Consider (56) and (57).

(56) *Le juge pardonnera aux criminels.*

(The judge will pardon the criminals.)

(57) *Les criminels seront pardonnés par le juge.*

(The criminals will be pardoned by the judge.)

Kayne argues persuasively that (57) is not derived from (56) by the passive transformation. Instead, he argues, this must be a base construction where *pardonné* is an adjective with an agent complement. In this kind of case there is no possibility of appealing to the underlying status of *juge* as a subject to facilitate the interpretation of an adverb. Yet when an adverb is present as in (58), it can be interpreted as modifying *juge*.

(58) *Les criminels ont été pardonnés avec conviction par le juge.*

(The criminals were pardoned by the judge with enthusiasm.)

In order to express the generalization that the interpretation of the adverb in (58) is no different in kind from those in (53)-(55), we should frame the interpretative rule of adverbs in such a way that it depends on agency and not subjectness.

13. This argument is consistent with the overall spirit of the autonomy hypothesis in that it provides support for the notion that semantic interpretation for these adverbs does not need access to the notion of 'deep structure subject.'

The same observation can be made with respect to English. Siegel (1975) notes that the (b) sentences below cannot be derived by the passive transformation because there is no corresponding active, as the (a) sentences demonstrate.

(59)a. **The Eskimos uninhabited Antartica.*

b. *Antartica is uninhabited by the Eskimos.*

(60)a. **The press unreported the disturbances.*

b. *The disturbances were unreported by the press.*

In these sentences then the deep structure subject is the same as the surface structure subject. Yet when an adverb is present in the (b) sentences above, it is interpreted with the agent complement of the adjective and not the subject.

(61) *Antartica is uninhabited by the Eskimos intentionally.*

(62) *The disturbances were unreported by the press for fear of reprisals.*

3. C1-P1, The Specified Subject Condition and Subcategorization

Turn now to the patterning of non-reflexive clitics in the *faire* construction. We are already in a position to explain the unacceptability of (63) and the acceptability of (64).

(63)a. **Elle fera les partir.*

(*She will make him leave.*)

b. **Elle fera le manger à Jean.*

(*She will make Jean eat it.*)

c. **Elle fera lui manger ce gâteau.*

(*She will make him eat this cake.*)

d. **Elle fera le lui manger.*

(*She will make him eat it.*)

(64)a. *Elle lui fera manger ce gâteau.*

(*She will make him eat this cake.*)

b. *Je te ferai connaître cette fille.*

(*I will make you know this girl.*)

c. *On leur a fait boire du vin.*

(*They made them drink some wine.*)

We can prevent the generation of (63) by following either Kayne's or Emonds' version of C1-P1 represented in (33) and (32) respectively. In Kayne's formulation we are unable to generate (63) without violating the structural description of C1-P1. In Emonds' formulation, C1-P1 would follow the verb raising transformation in (31) and we would be unable to generate (63) without violating the A over A constraint.

Our account of the unacceptability of the sentences in (65) is somewhat more complex.

(65)a. **Je lui ferai écrire mon ami.*

(*I will make my friend write to him.*)

b. **La peur de la police te fera téléphoner Jean.*

(*Fear of the police will make Jean telephone you.*)

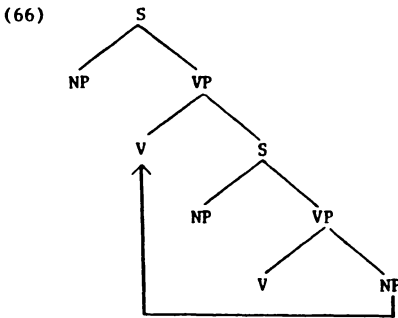
c. **Cet éclairage vous fait ressembler cette statue.*

(*This lighting makes this statue resemble you.*)

d. **Les menaces leur ont fait répondre le criminel.*

(*The threats made the criminal answer them.*)

First let us consider how Kayne's transformational analysis blocks the generation of (65). Kayne appeals to Chomsky's (1973) Specified Subject Condition to exclude these sentences. However there is some reason to doubt that the Specified Subject Condition is at work here. Kayne's framework involves a verb raising transformation to create the *faire* construction. This process is represented in (66).



Notice that in this analysis, the verb raising process violates the Specified Subject Condition.¹⁴ There is no principled justification available for why the indirect object should obey the Specified Subject Condition but the verb raising rule should not.

Another phenomenon which no analysis that appeals to the Specified Subject Condition can deal with is the acceptability judgements containing animate objects of the embedded verb. Consider (67).

- (67) *Je ferai embrasser Marie à Paul.*
(I will make Paul kiss Marie.)

Not all speakers accept (67). Some speakers cannot accept an animate object to the second verb. But speakers who do accept (67) show the following acceptability judgements.

- (68)a. **Marie se fera embrasser à Paul.*
(Marie will make Paul kiss her.)

14. This movement rule would also violate an analysis which held that the subject NP leaves a trace when it is postposed. Alternatively Carlos Quicoli has proposed that the embedded V moves into COMP position. This alternative does not violate the Specified Subject Condition. However, Quicoli's analysis has no account of (69) and (70) since these Pro-PP's would need to move out of COMP in violation of Chomsky's (1973) Comp to Comp Condition.

b.**Marie te fera embrasser à Paul.*

(*Marie will make Paul kiss you.*)

c.**Paul voulait me faire embrasser à Marie.*

(*Paul wanted to make Marie kiss me.*)

Under the verb raising analysis none of the judgements of the sentences in (68) can be explained readily since none violates the Specified Condition. We would thus expect them to be acceptable, but they are not. Kayne presents no explanation for this anomalous fact.

Yet another clitic phenomenon argues against any appeal to the Specified Subject Condition. Observe the following sentences.

(69)a.*Cela fera aller Jean à Paris.*

(*That will make Jean go to Paris.*)

b.*Cela y fera aller Jean.*

(*That will make Jean go there.*)

(70)a.*Elle fera sortir Jean de cette chambre.*

(*She will make Jean come out of that room.*)

b.*Elle en fera sortir Jean.*

(*She will make Jean come out of there.*)

In the (b) sentences above, the prepositional clitics *y* and *en* are capable of being moved over a specified subject. Kayne finds no well motivated explanation for this fact.

As an alternative to the appeals to the Specified Subject Condition, let us consider postulating the following addendum to the subcategorization principles developed in (9).

(9)d. No non-local rule will violate a-c.

(9d) actually raises subcategorization restrictions to the level of a condition on the interpretability of surface structure. It begins to limit the deformation of deep structure to the point where given access to local rules, a procedure can be constructed

that uniquely associates a head with its subcategorized elements on surface structure. The characterization of this procedure as well as the full force of this suggestion is sketched in Hendrick (in preparation) where it is argued that such a position enriches surface structure to the point that grammatical relations and consequently logical form are interpretable directly from surface structure. As an illustration of (d) at work, consider the contrast in acceptability judgements below.

(71)a. *Jean est infidèle à ses parents.*

(Jean is unfaithful to his parents.)

b. *Jean leur est infidèle.*

(Jean is unfaithful to them.)

(72)a. *Jean semble infidèle à ses parents.*

(Jean seems unfaithful to his parents.)

b. **Jean leur semble infidèle.*

(Jean seems unfaithful to them.)

(72b) is ill-formed in relation to the meaning of (72a) : it can only correspond to the sense of (73).

(73) *Jean semble à ses parents infidèle.*

(Jean seems to his parents unfaithful.)

The explanation for the contrast between (71b) and (72b) is that in the latter case, *leur* and *infidèle* have a third node, *sembler*, in their grossest constituent analysis which is optionally subcategorized for a following NP.¹⁵ This NP can only appear in a PP given the phrase structure rules of French. I assume here that

15. The phrase structure rules will only allow these NP's to appear in PP's. This is similar to the claim in Chomsky's *Remarks on Nominalizations* that the noun *destruction*, like the verb *destroy*, is subcategorized for a following NP. The phrase structure rules expanding NP however only permit this NP to appear in a headless PP. Subsequently a transformation inserts *of*. Note that this is another case where the strictly local subcategorization rules are too restrictive since they would require that *destruction* be subcategorized for a PP.

all PRO forms carry in their lexical entry a syntactic feature identifying them as a PRO form of a particular category. In this case *leur* carries the feature specification [+N]. We are unable to associate *leur* and *infidèle* without violating (9b). The only interpretation that will not violate (9b) is that of (73). On the other hand, in (71b) the adjective and clitic are not separated by a node in the grossest analysis subcategorized for a noun phrase. Hence the association between the two is unique and not blocked.

Note incidentally that the same phenomenon appears in English.

(74)a. *John is courteous to me.*

b. *To me, John is courteous.*

(75)a. *John seems courteous to me.*

b. *To me, John seems courteous.*

On one reading of (75a) it is synonymous to (74a). Despite this fact (75b) cannot be synonymous to (74b). In other words, *to me* can be associated with *courteous* in (74b) because there is no intervening node in the grossest constituent analysis which *to me* can be associated with. In (75b) however (9b) prohibits the association of *to me* and *courteous* because *seem* is in the grossest analysis in a way parallel to that of (72b).

(9d) puts an explanation of the clitic patterns in (65) and (68)-(70) within reach. Return to the examples in (68). All of the clitic PRO forms in (68) will carry the feature [+N]. The fact that in each case *faire*, which is subcategorized for a NP, is in the grossest constituent analysis between the clitic and the embedded verb, prevents us from associating the latter two. However, when the clitic preceding *faire* is not lexically marked as [+N], (9d) predicts that the sentence should not be ill-formed. This prediction is borne out in (69) and (70). Kayne argues persuasively that *y* and *en* are pro-prepositions. Since *faire* is

not subcategorized for a preposition, (9d) does not prevent associating *y* and *aller* in (69) or *en* and *sortir* in (70).

Observe that the sentence in (76), in contrast to those of (65) are acceptable.

(76) *Je le ferai manger à Jean.*

(I will make Jean eat it.)

The acceptability of (76) can be explained by (9d) if we take it to be the product of a local rule. This is consistent with Emonds' analysis of *le*, *la*, *les* as being moved by a local rule in distinction to Cl-P1 which operates over a variable and which is structure preserving (cf. Emonds, 1976). The analysis being presented here would then predict that, in contrast to *le*, *la*, *les*, the other object clitics should not be acceptable before *faire*. We make this prediction because (9d) prevents associating these pronouns with the embedded verb because there is a verb, *faire*, in the grossest constituent analysis between them also requiring a NP.

4. Conclusions

I conclude that the subcategorization principles which are justified on independent grounds, permit a characterization of the *faire* construction in French. Further extensions of these ideas could be made in order to give a natural account for the idiosyncratic divergences between the *faire* construction and the *laisser* construction as lexically governed, which is what we would expect within the lexicalist hypothesis. Similar research could account for the difference between the *faire*+infinitive construction and the *faire*+*par* construction. The subcategorization principles permit a cyclic formulation of Cl-P1 that is learnable.

Finally they permit an explanation of certain clitic phenomenon that appear to be anomalous in alternative descriptions of the *faire* construction.

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